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Moreover, the Examiner has yet to provide any proof that one skilled in the art would conclude that the cured adhesive is strippable.

Second, assuming arguendo that the adhesive is strippable, Applicants respectfully submit that it would be necessary first to remove the capillary tube portion of the structure before one could begin stripping the adhesive portion of the ribbon from the fibers. The ribbon, as recited in claim 21, has a length of 2 to 300 mm. This indicates that the ribbon used for comparison purposes would be complete for 2 to 300 mm. As this is relevant to Komoto, the ribbon of Komoto would include: (1) polarization-maintaining fibers; (2) a length of capillary tube; and (3) cured adhesive, where the polarization-maintaining fibers are adhered to the capillary tube with the cured adhesive. Therefore, stripping any portion of the ribbon, including the cured adhesive, would necessarily have to start with the removal of the capillary tube.

Applicants respectfully submit that it is impossible to remove a capillary tube portion of a ribbon without damaging, destroying, or misaligning the underlying polarization-maintaining fibers once the assembling adhesive is cured. As shown by Komoto, capillary tubes are made of borosilicate glass, quartz, etc. Glass removal methods for such glasses include chemical decomposition, grinding, cutting, and compression. While all of these methods may work with unassembled glass and glass tubes, certain relevant conditions must be remembered when applied to the present case. A significant purpose of the capillary tube in Komoto is to retain and strengthen the end portions of the delicate optical fibers. Therefore, the adhesive retaining the capillary tube is necessarily robust to eliminate the possibility of inadvertent removal, and the capillary tube is necessarily strong in relation to the delicate fibers. Using these factors, the four removal methods are discussed further below.

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Using a chemical to dissolve the capillary tube will not function to remove the capillary tube portion of the ribbon without damaging the underling fibers. Any solvent that dissolves the capillary tube will certainly dissolve or damage the finer optical fibers (which are also made of glass).

Grinding the capillary tube portion of the ribbon will result in damaged fibers. Two dimensional surface grinding operations will not work for this purpose as only removing one side will fail to release the adhered fibers. Any subsequent fixturing would then be made against the delicate fibers resulting in damage. Turning or "O.D." grinding would be likewise impossible due to the tolerances required and the impossibility of safely supporting the remainder of the non-contained fiber.

Removing the capillary tube portion of the ribbon by cutting would also fail to work as glass cutting requires a scribe line and subsequent force to bend the part about the scribe line. A break of this sort would hinge about a point on the outside diameter of the capillary tube. Because the hinge point is a distance away from the contained fibers, the fibers would be forced to stretch a relatively significant distance, which is something glass fibers are unable to do with any degree of success. The optical fibers will fail before they stretch. Even if the capillary tube could be broken, the cured adhesive would retain any portion of the fibers within the remaining capillary tube causing the fibers to break when the tube is removed.

Lastly, compression of the capillary tube will also fail to remove the tube without damaging the delicate fibers. Any compression required to fail the capillary tube will also compress the cured adhesive and fibers resulting in damage. This method would also result in misalignment, as the entire tube would break upon compression.

In conclusion, removal of the capillary tube portion of the ribbon, the first step required for stripping a Komoto style structure, is impossible without also damaging the

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housed fibers. Therefore, no portion of the capillary tube can be stripped to expose the polarization maintaining fibers.


In view of the forgoing, reconsideration and withdrawal of the §102(b) rejection over Komoto is respectfully requested.

2. Claims 3-6 and 20 were rejected under §103(a) over Komoto in view of Kozuka. Applicants respectfully submit that the arguments submitted above distinguish claim 21 from Komoto. Since Kozuka does not overcome the deficiencies of Komoto, and since claims 3-6 and 20 depend whether directly or indirectly from claim 21, claims 3-6 and 20 are also believed to be allowable over the prior art of record.

If Examiner Simone does not accept these arguments and allow this application, she is requested to contact Applicants' representatives and grant a telephonic interview before proceeding any further with this application.

The Commissioner is hereby authorized to charge any additional fees associated with this communication or credit any overpayment to Deposit Account No. 50-1446.

Respectfully submitted,



Stephen P. Burr
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Date

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